**Bottom Line:**
This meta-analysis found that the influenza vaccine is associated with a significantly lower risk of major adverse cardiovascular events in adults with coronary disease.

The benefit of influenza vaccination is strongest in adults with a history of recent acute coronary syndrome within the previous six months (number needed to treat – NNT = 8). (LOE = 1a)

**Reference:**

**Study Design:** Meta-analysis (randomised controlled trials)  
**Funding:** Government  
**Setting:** Various (meta-analysis)  
**Allocation:** Unknown

**Synopsis:**
These investigators searched multiple sources including MEDLINE, EMBASE, the Cochrane Register, reference lists of eligible articles, clinicaltrials.gov and conference abstracts without language restrictions for all published and unpublished randomised clinical trials comparing influenza vaccination with placebo or standard care.

Two investigators independently reviewed potential studies for inclusion and methodologic quality using standard scoring tools. Disagreements were resolved by consensus.

Six randomised controlled trials met inclusion criteria for the final meta-analysis. These trials (n=6735) compared influenza vaccine with placebo or control for a mean duration of 7.9 months.

The primary outcome measured was a composite of major adverse cardiovascular events, including cardiovascular death or hospitalisation for MI, unstable angina, stroke, heart failure or urgent coronary bypass surgery.

In the analysis of the six included trials, significantly fewer vaccinated patients developed a major adverse cardiovascular event compared with placebo or control patients (2.9 vs 4.7 per cent, respectively; NNT = 58, 95% CI 38–124).

The benefit of vaccination was strongest in the subset of patients with a history of recent acute coronary syndrome within the previous six months (10 per cent with vaccine vs 23 per cent with placebo or control; NNT=8, 6–13).

There was, however, no significant difference in all-cause mortality between the vaccinated and placebo or control patient groups.

Formal statistical analyses found no evidence of significant heterogeneity among the trials or publication bias.

Flu vaccine reduces risk of adverse CV events in high-risk patients